

STACHYBOTRYS MICROSPORA (MATHUR AND SANKHLA) JONG AND E. E. DAVIS—A NEW RECORD FROM INDIA

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STACHYBOTRYS MICROSPORA Jong and E. E. Davis—A new fungus for India was isolated from the soils of *Terminalia* forests of Pachmarhi (M.P.) during November, 1982. The soil (colour of the soil dark brown (Hue—10 YR) 3/3, pH 4.9 and moisture 20.93%)¹ was collected from the Canopy of *Terminalia bellerica* and the fungus was isolated on streptomycin rose bengal medium² following soil plate method³. The first report of this fungus was from the rhizosphere of *Arachis hypogea* in Zaria, North Nigeria⁴. *Stachybotrys microspora*—a dematiaceous hyphomycete, which showed characteristic phialides with conspicuous collarettes, detachable from conidiophore and its globose, olive gray, coarsely roughened conidia has been isolated for the first time from India⁵ and is morphologically different from *Stachybotrys atra* var. *microspora* reported by Mathur and Sankhla⁶ (table 1).

Characteristics of the fungus

Colonies on the Potato Dextrose medium restricted, colourless becoming brown at age, reverse brown. Mycelium septate. Conidiophores arising solitary determinate, 3-septate, micronematous, hyaline at young age but the apical cell became dark olivaceous towards the apex at maturity, upper part of apical cell rough walled, $50-55 \times 2-4 \mu\text{m}$.

The phialides are borne on the apical cell in a cluster of 2 to 6, Obovate to pyriform with conspicuous collarettes, $8-9 \times 4-5 \mu\text{m}$, detachable from conidiophores. Conidia arising singly, when young smooth, elliptical or pyriform $6-8 \times 4-5 \mu\text{m}$, becoming globose, $5-6 \mu\text{m}$ in diameter, dark blackish brown, coarsely roughened and unicellular having no guttules at maturity (figures 1, 2).

The culture of the isolate has been deposited at Commonwealth Mycological Institute, Kew, England (IMI 278550).

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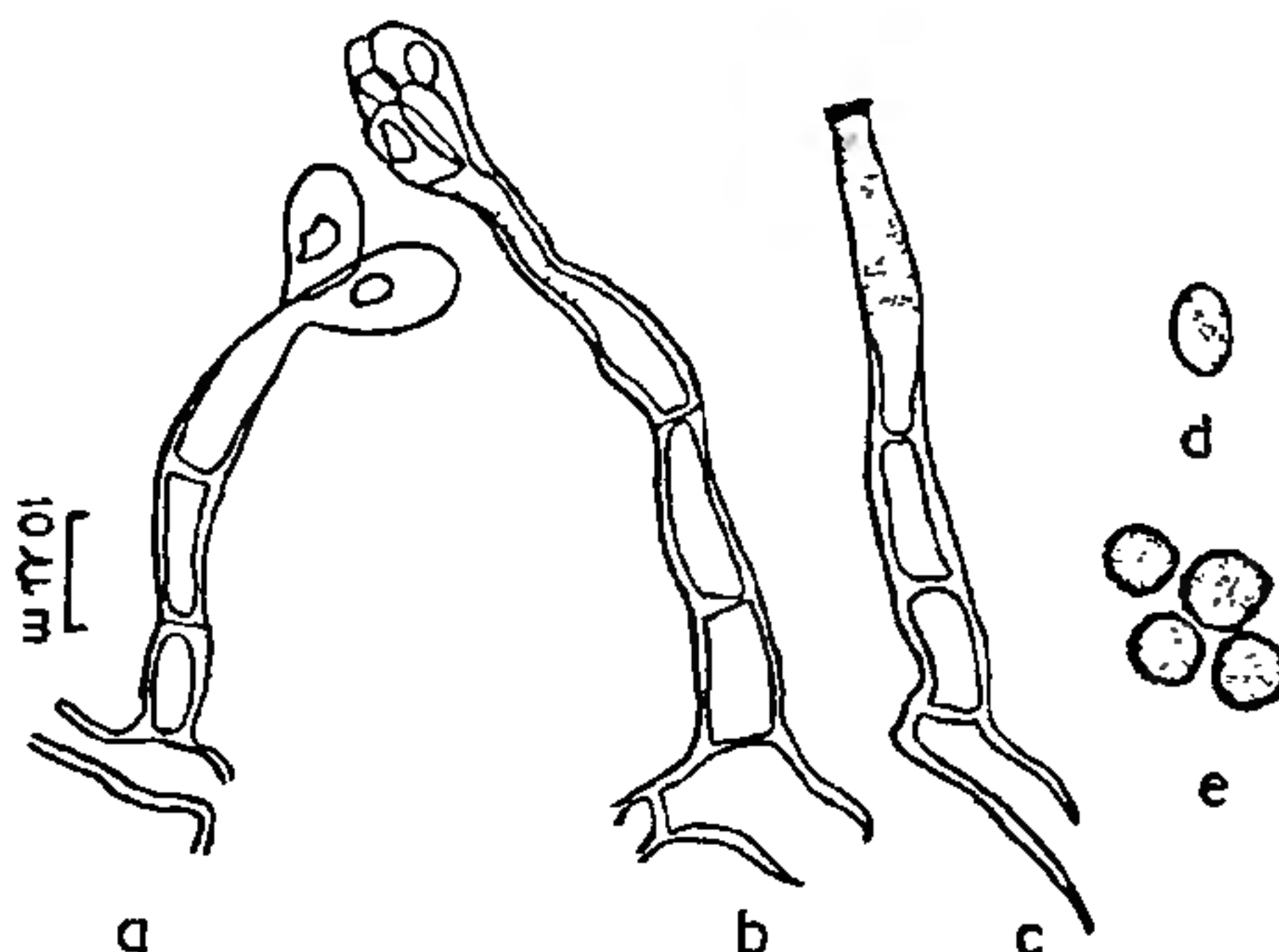


Figure 1. *Stachybotrys microspora* a—Young conidiophore with two phialides, b—Mature conidiophore with a whorl of phialides; c—Mature conidiophore without phialides showing minute rough wall at the upper part; d—Young conidia, e—Mature conidia.

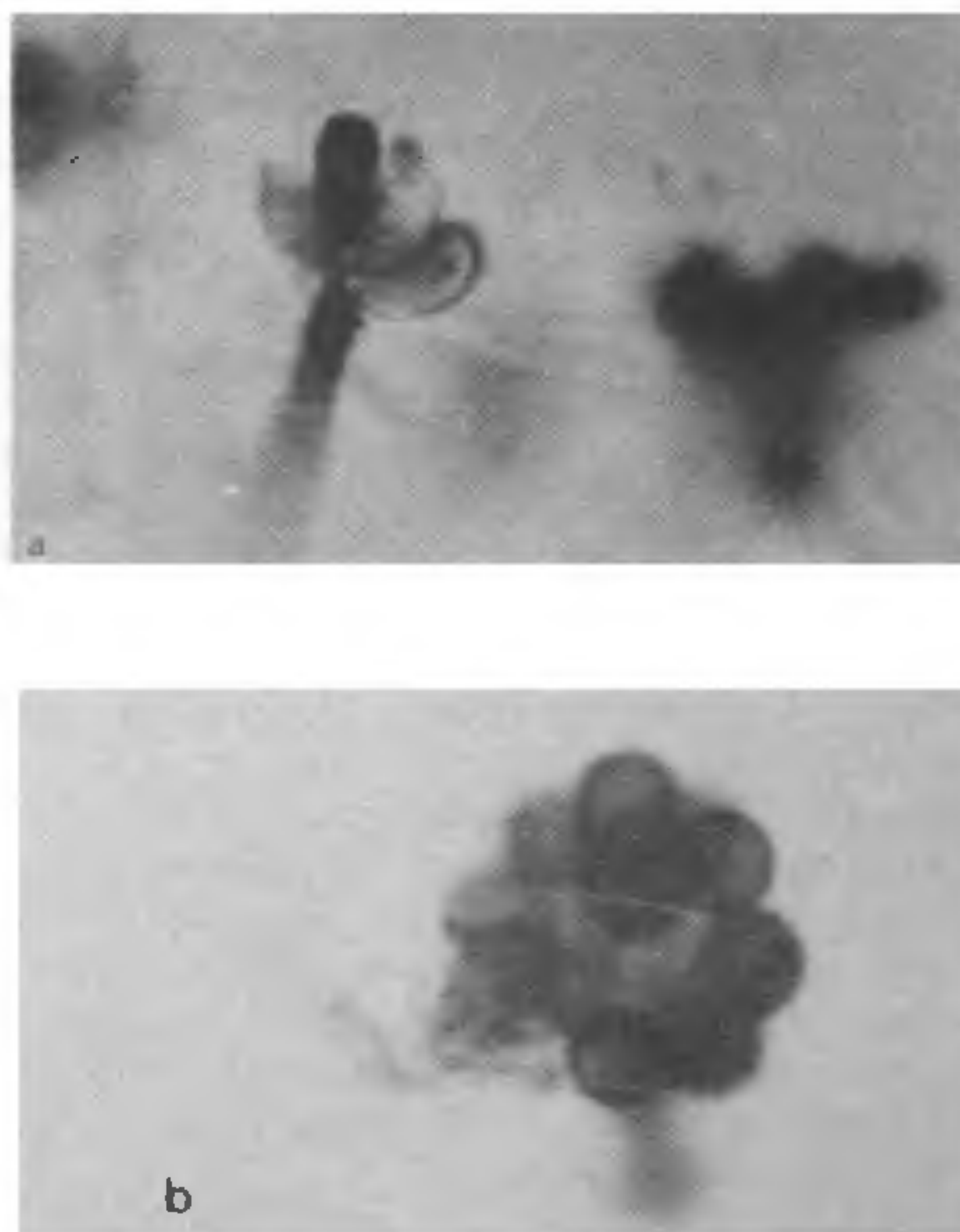


Figure 2. *Stachybotrys microspora* (a) Mature conidiophore with a whorl of phialides ($\times 1000$) (b) Mature conidia ($\times 1000$).

Table 1 Comparative morphological characteristics of *S. atra* var. *microspora* (Mathur and Sankhla) and *S. microspora* (present isolate).

Character	<i>S. atra</i> var. <i>microspora</i> (Mathur and Sankhla)	<i>S. microspora</i> (present isolate)
Colony	Black, with central portion dark and outer rings light in colour.	Uniformly brown colonies.
Mycelium	Subhyaline to hyaline branched, septate, measuring 2.4–4.0 μm in diameter.	Hyaline, septate measuring 1.5–2.5 μm in diameter.
Conidiophores	48–80 \times 2.4–4 μm brown, 2–3 septate, the apical cell paler in colour with swollen tip.	50–55 \times 2.5–3 μm , hyaline at young age but the apical cell became dark olivaceous towards the apex at maturity, upper part of apical cell rough walled.
Phialides	5–8 in number, obovate to clavate, subhyaline to light brown 6.4–8 \times 2.0–2.4 μm .	2–6 in number, obovate to pyriform hyaline, detachable 8–9 \times 4–5 μm .
Conidia	Borne in chain, elliptical, smooth having two guttules smoky brown, 6.4–8 \times 2.4–3.2 μm .	Arising singly, at young age elliptical to pyriform, becoming globose, coarsely roughened, enclosing no guttules, blackish brown, 5–6 μm in diameter.

firming the identity of the fungus. Thanks are also due to Dr R. R. Das for providing laboratory facilities.

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DRAPARNALDIA CHAMPLAINENSIS COOK (CHAETOPHORALES—CHLOROPHYTA): AN ADDITION TO THE INDIAN FLORA

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THE genus *Draparnaldia* Bory is represented in India only by three species viz., *D. plumosa* Agardh^{1,2}, *D. acuta* (C. A. Ag.) Kutz^{3,4} and *D. iyengarii* Tiwari et al^{5,6}. During the course of our study of Chaetophoralean forms of India, the authors found *D. champlainensis* Cook (figure 2) in a fresh water stream of Madhya Pradesh. *D. champlainensis* was first described from lake Champlain in USA⁷. Thereafter it has not been reported from any other part of the world. Long filaments of the plant were collected from a permanent fresh water stream of village Bandhogarh in Satna district of Madhya Pradesh during May 1983.

Plants upto 9 cm in length (figure 2) were attached to the stone pebbles and exposed roots of angiosperms by their rhizoidal branches originating from the basal cells of the axis (figure 1). Occasionally, at the originating points of long lateral, hyaline rhizoidal branches were developed which irregularly coiled around the main axis and formed a sort of cortication. However, cortication is not so pronounced as reported for *D. champlainensis* by Cook. Filaments are profusely branched, branches always originating just below the septa. These are of two types: (1) Short laterals or branches of limited growth (figure 3) formed in whorls from most of the cells and covering the entire axis and giving a beaded appearance to the filaments. (2) Long laterals or branches of unlimited growth which are modified short laterals and which are also formed usually in whorls of four at irregular intervals. Usually in a particular whorl of long lateral, all laterals are nearly equal in length but there is a tendency to have one long lateral more pronounced. Cells of the main axis are barrel shaped. They measure upto 30 μm in width and 10–45 μm in length and contain a parietal girdle of chloroplast with usually upto four pyrenoids. Each of the short laterals produces upto four hyaline hairs (figure 3) from its basal portion. Hairs are upto 5 μm in breadth. Terminal cells of the laterals are long, attenuated at their distal portion but never produce hairs. Cells of the short laterals are upto 8 μm in breadth and 60 μm in length. These contain a parietal band of chloroplast with two pyrenoids, often covering the entire space of the cell.